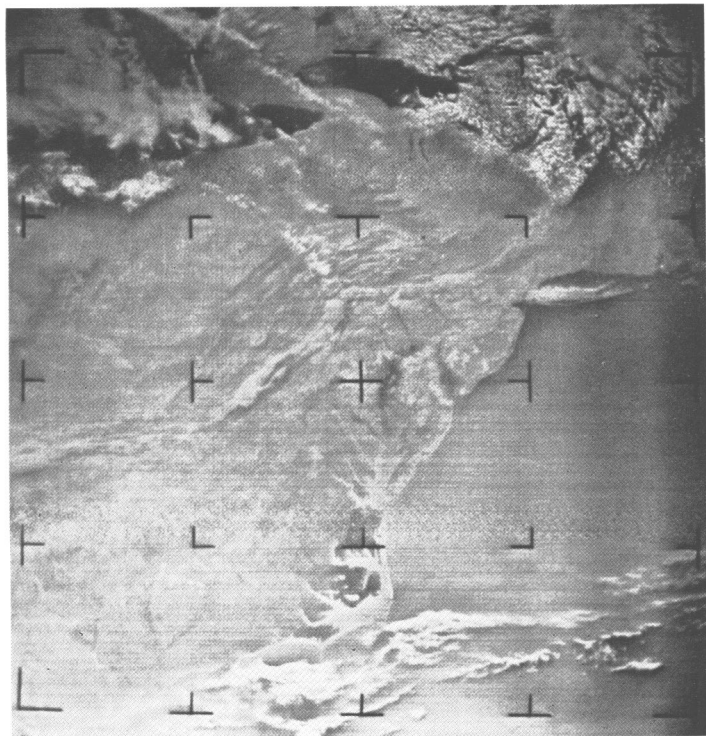
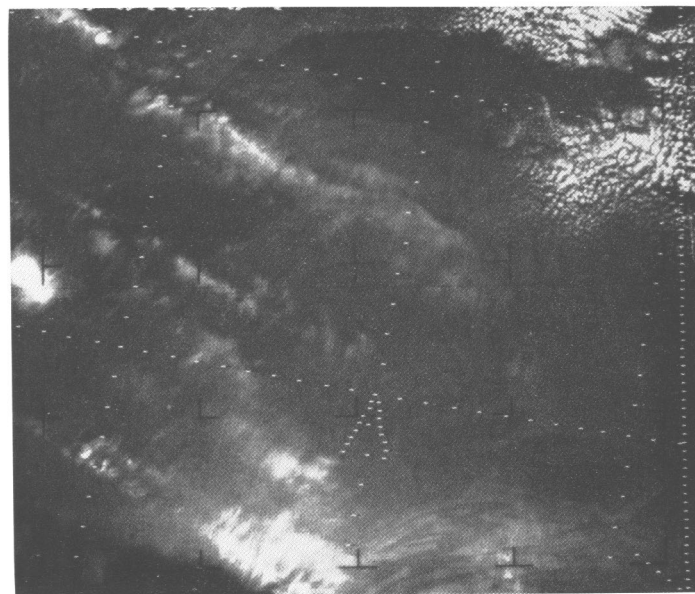


PICTURE OF THE MONTH



(a) Nimbus APT, Pass 137, 1617 GMT, September 6, 1964.



(b) Nimbus AVCS, Pass 138/137, Camera 2, frame 21, 1618 GMT, September 6, 1964.

These photographs were taken almost simultaneously by different camera systems of the Nimbus I satellite. At the time (near local noon, September 6, 1964), Nimbus I was passing northward over the eastern United States at an altitude of approximately 425 statute miles.

Photograph (a) was taken by the APT (Automatic Picture Transmission) camera and was transmitted immediately and simultaneously to several ground receiving stations which were within range. Photograph (b) was taken by the high-resolution AVCS (Advanced Vidicon Camera System) about 1 min. later than (a), and it shows the area around Lakes Erie and Ontario in greater detail. Photograph (b) was first stored on magnetic tape within the satellite, was received at the Rosman, N.C., antenna site on the following orbital pass, and was then immediately transmitted via wide-band communication link to the Goddard Space Flight Center, Greenbelt, Md.

At the time of these two photographs, a surface anticyclone (1023 mb.) was centered over Pennsylvania, with clear or nearly clear skies over much of the Middle Atlantic region. Numerous topographic features are visible in (a), especially in the mountainous areas of Pennsylvania and West Virginia, which lie just above and

to the left of the center-cross fiducial mark. Also visible in (a) are portions of Lakes Erie and Ontario (near top of picture), a large area of cumulonimbus cloudiness east of Lake Ontario, and the entire Atlantic coastline from Cape Hatteras to Cape Cod. The broken cloudiness east and south of Cape Hatteras is associated with the remains of a weak quasi-stationary front. In (b) the cumulonimbus nature of the cloudiness east of Lake Ontario is more readily apparent, as are the cirrus bands to the west.

Pronounced sun glint in (a) is centered over the waters of Pamlico and Albermarle Sounds, just west of Cape Hatteras, with lesser reflectivity from nearby waters northward to Chesapeake Bay.

These pictures from the Nimbus experiment show the excellent photographic resolution obtained. Considering the fact that both are television pictures, that (a) was first recorded at the ground on facsimile paper, and that several transformations were necessary to reproduce these printed versions, the quality is remarkably good.

Dotted lines on (b) are machine-produced latitude-longitude grid lines. The photograph is reprinted through courtesy of the National Aeronautics and Space Administration.